

## IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A computer-implemented method for selecting an optimal balance between direct cost and a number of suppliers comprising:

soliciting bids from a plurality of suppliers for a plurality of lots;

storing bid information from a plurality of suppliers for a plurality of lots in a database;

and

upon completion of bidding for the plurality of lots:

determining using a computer a first optimal solution that includes an initial family of lot-supplier assignments; and:

if the first optimal solution has the lowest cost value:

performing multiple iterations of the following steps:

decreasing the number of suppliers in the family to form a reduced family;

determining a revised cost value for the reduced family; and

generating a second solution having the decreased number of suppliers;

and

if the first optimal solution has the highest cost value:

performing multiple iterations of the following steps:

increasing the number of suppliers in the family to form an increased family;

determining a revised cost value for the increased family; and

generating a second solution having the increased number of suppliers.

2. (Previously presented) The method of claim 1 wherein the generating comprises:

inputting the bids into an optimization routine, including selecting the number of suppliers for each optimal solution, determining lowest bids received from the number of suppliers for the lots for each optimal solution, calculating a direct cost from the lowest bids received from the number of suppliers for each optimal solution, and

providing each optimal solution to a buyer.

3. (Original) The method of claim 1 wherein the generating comprises:  
choosing a minimum cost; and  
determining the optimal solution with a direct cost being at least the minimum cost.
4. (Original) The method of claim 1 wherein the storing comprises:  
removing the bids from at least one undesired supplier.
5. (Original) The method of claim 4 wherein the generating comprises:  
providing the optimal solution with lowest bids from the suppliers other than the at least one undesired supplier.
6. (Original) The method of claim 1 wherein the storing comprises:  
choosing the bids from at least one preferred supplier.
7. (Original) The method of claim 6 wherein the generating comprises:  
providing the optimal solution with lowest bids from the at least one preferred supplier for the lots on which the at least one preferred supplier bid lower than other suppliers and lowest bids from the other suppliers for the lots on which the at least one preferred supplier did at least one of not bid and not bid the lowest bid.
8. (Original) The method of claim 1 wherein the generating comprises:  
ranking the bids in accordance with cost.
9. (Original) The method of claim 1 wherein the soliciting comprises:  
identifying at least one of goods and services to be purchased.
10. (Original) The method of claim 1 further comprising:  
displaying at least one of the first and second optimal solutions.
11. (Original) The method of claim 1 wherein the generating comprises:  
assigning an integer value to each lowest bid in each lot.

12. (Previously presented) The method of claim 1 wherein the bid information comprises: at least one bid on a first second, third, and fourth lot from a first supplier; at least one bid on the first, second, third, and fourth lots from a second supplier, at least one bid on the first, second, third, and fourth lots from a third supplier, and at least one bid on the first, second, third, and fourth lots from a fourth supplier.

13. (Previously presented) The method of claim 12 wherein the first and second optimal solutions comprise: the first optimal solution, having a first cost, for three suppliers, the first optimal solution listing the first supplier as a provider for at least one of the first, second, third and fourth lots, and having a first cost, the third supplier as the provider for at least one of the first, second, third, and fourth lots, and the fourth supplier as the provider for at least one of the first, second, third and fourth lots; and the second optimal solution, having a second cost, for two suppliers, the second optimal solution listing the third supplier as the provider for at least one of the first, second, third, and fourth lots, and the fourth supplier as the provider for at least one of the first, second, third and fourth lots.

14. (Original) The method of claim 1 further comprising: selecting one of the optimal solutions.

15. (Cancelled)

16. (Currently amended) A system for selecting an optimal balance between direct cost and a number of suppliers comprising:

- a database for receiving and storing bid information from a plurality of suppliers for a plurality of lots; and

- a processor in communication with the database and configured to, upon completion of bidding for the plurality of lots:

- determine a first optimal solution that includes an initial family of lot-supplier assignments; and:

- if the first optimal solution has the lowest cost value:

- perform multiple iterations of the following steps:

decreasing the number of suppliers in the family to form a reduced family;  
determining a revised cost value for the reduced family; and  
generate a second solution having the decreased number of suppliers; and  
if the first optimal solution has the highest cost value:  
perform multiple iterations of the following steps:  
increasing the number of suppliers in the family to form an increased family;  
determining a revised cost value for the increased family; and  
\_\_\_\_\_ generate a second solution having the increased number of suppliers.

17. (Original) The system of claim 16 wherein the bid information comprises at least one bid from a supplier for each lot.

18. (Original) The system of claim 16 wherein at least one of the first and second optimal solutions comprises a chosen supplier for each lot.

19. (Currently amended) A computer program product for selecting an optimal balance between direct cost and a number of suppliers, the computer program product being embodied in a computer readable medium and comprising computer instructions for:

receiving and storing bid information from a plurality of suppliers for a plurality of lots;  
upon completion of bidding for the plurality of lots:

determining a first optimal solution that includes an initial family of lot-supplier assignments; and:

if the first optimal solution has the lowest cost value:

performing multiple iterations of the following steps:

decreasing the number of suppliers in the family to form a reduced family;

determining a revised cost value for the reduced family; and

generating a second solution having the decreased number of suppliers;

and

if the first optimal solution has the highest cost value:

performing multiple iterations of the following steps:

increasing the number of suppliers in the family to form an increased family;

determining a revised cost value for the increased family; and  
generating a second solution having the increased number of suppliers.

20. (Previously presented) The computer program product of claim 19 wherein the bid information comprises at least one bid from a supplier for each lot.

21. (Previously presented) The computer program product of claim 19 wherein at least one of the first and second optimal solutions comprise a chosen supplier for each lot.

22. (Previously presented) The computer program product of claim 19 wherein the bid information comprises: at least one bid on a first, second, third, and fourth lot from a first supplier; at least one bid on the first, second, third, and fourth lots from a second supplier, at least one bid on the first, second, third, and fourth lots from a third supplier, and at least one bid on the first, second, third, and fourth lots from a fourth supplier.

23. (Previously presented) The computer program product of claim 22 wherein the first and second optimal solutions comprise: the first optimal solution, having a first cost, for three suppliers, the first optimal solution listing the first supplier as a provider for at least one of the first, second, third and fourth lots, and having a first cost, the third supplier as the provider for at least one of the first, second, third, and fourth lots, and the fourth supplier as the provider for at least one of the first, second, third and fourth lots; and the second optimal solution, having a second cost, for two suppliers, the second optimal solution listing the third supplier as the provider for at least one of the first, second, third, and fourth lots, and the fourth supplier as the provider for at least one of the first, second, third and fourth lots.